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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,951

10/06/2005

Owain Llyrr Parri

MERCK-3078

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7590

05/12/2009

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EXAMINER

BRIGGS, NATHANAEL R

ART UNIT

PAPER NUMBER

2871

NOTIFICATION DATE

DELIVERY MODE

05/12/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@mwzb.com

Office Action Summary	Application No. 10/551,951	Applicant(s) PARRI ET AL.	
	Examiner NATHANAEL R. BRIGGS	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/6/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species A1, B1, and C1 in the reply filed on 24 February 2009 is acknowledged. For clarity, the configurations wherein the +A and +C plates are situated on the same side of the switchable LC cell, having the configuration 1 of claim 7:

P(90)	C	A(90)	LC(0)	P(0)
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2. and configuration 1 of claim 8:

S	P(90)	C	S	A(90)	LC(0)	S	P(0)	S
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3. will be examined, and the rest considered as mutually exclusive species, as indicated in the requirement for election in the previous action. Furthermore, claims 21-23 are withdrawn from consideration for being non-elected, mutually exclusive species.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Allen et al. (US 2003/0193636).**

6. Regarding claim 11, Allen discloses a compensator (see figures 4-5, for instance) comprising at least one first retardation film ([0039]) comprising optically uniaxial positive calamitic liquid crystal material and having an optical axis substantially parallel

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to the film plane (+A plate), at least one second retardation film (514) comprising optically uniaxial positive calamitic liquid crystal material and having an optical axis substantially perpendicular to the film plane (+C plate), and optionally at least one linear polarizer (508, 510). Claim 11 is therefore unpatentable.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-10, 12-20, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al. (US 2003/0193636) in view of Park (US 2003/0043329).

9. Regarding claim 1, Allen discloses an LCD (see figures 4 and 5, for instance), said display comprising a switchable liquid crystal cell (502) sandwiched between two polarizers (508, 510), said liquid crystal cell comprising a layer of a liquid crystal medium between two plane parallel substrates at least one of which is transparent to incident light, characterized in that the LCD comprises at least one first retardation film ([0039]) comprising optically uniaxial positive calamitic liquid crystal material and having an optical axis substantially parallel to the film plane (+A plate), and at least one second retardation film (514) comprising optically uniaxial positive calamitic liquid crystal material and having an optical axis substantially perpendicular to the film plane (+C plate). However, Allen does not expressly disclose wherein the LCD is an IPS LCD,

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wherein the liquid crystal molecules of said medium are reoriented by application of an electric field that has a major component substantially parallel to the substrates.

10. Regarding claim 1, Park discloses an IPS LCD, wherein the liquid crystal molecules of said medium are reoriented by application of an electric field that has a major component substantially parallel to the substrates ([0008]).

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an IPS device such as Park with the configuration of Allen. The motivation for doing so would have been to increase viewing angle, as taught by Park ([0007]-[0008]). Claim 1 is therefore unpatentable.

12. Regarding claim 2, Allen in view of Park discloses a liquid crystal display according to claim 1 (see Allen figures 4-5, for instance), wherein said display comprises one +A plate and one +C plate ([0039], Allen). Claim 2 is therefore unpatentable.

13. Regarding claim 3, Allen in view of Park discloses a liquid crystal display according to claim 1 (see Allen figures 4-5, for instance), wherein the optical axis of the +A plate is parallel to the stretch axis of the polarizer that is situated on the same side of the liquid crystal cell as the +A plate. Claim 3 is therefore unpatentable.

14. Regarding claim 4, Allen in view of Park discloses a liquid crystal display according to claim 1 (see Allen figures 4-5, for instance), wherein the +A plate and/or +C plate comprise polymerized or crosslinked calamitic liquid crystal material. Claim 4 is therefore unpatentable.

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15. Regarding claim 5, Allen in view of Park discloses a liquid crystal display according to claim 1 (see Allen figures 4-5, for instance), wherein the +A plate comprises polymerized polymerised or crosslinked calamitic liquid crystal K-G material with planar orientation. Claim 5 is therefore unpatentable.

16. Regarding claim 6, Allen in view of Park discloses a liquid crystal display according to claim 1 (see Allen figures 4-5, for instance), wherein the +C plate comprises polymerized or crosslinked calamitic LC material with homeotropic orientation. Claim 6 is therefore unpatentable.

17. Regarding claim 7, Allen in view of Park discloses a liquid crystal display ~ according to claim 1 (see Allen figures 4-5, for instance), wherein the position positions of the individual components are is selected from the configuration 1:

P(90)	C	A(90)	LC(0)	P(0)
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18. Claim 7 is therefore unpatentable.

19. Regarding claim 8, Allen in view of Park discloses an LCD according to claim 7, wherein the positions of the individual components are selected from configuration 1:

S	P(90)	C	S	A(90)	LC(0)	S	P(0)	S
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20. Claim 8 is therefore unpatentable.

21. Regarding claim 9, Allen in view of Park discloses an LCD according to claim 7 (see Allen figures 4-5, for instance), wherein the +A plate and +C plate are situated on the same side of the switchable liquid crystal cell. Claim 9 is therefore unpatentable.

22. Regarding claim 10, Allen in view of Park discloses an LCD according to claim 7 (see Allen figures 4-5, for instance), wherein the +A plate and/or the +C plate are

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situated between the substrates of the liquid crystal cell. Claim 10 is therefore unpatentable.

23. Regarding claim 12, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the +A plate and +C plate are situated between the liquid crystal cell and the polarizer. Claim 12 is therefore unpatentable.

24. Regarding claim 13, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the thickness of the +A plate is from 0.6 to 1.6 μm . Claim 13 is therefore unpatentable.

25. Regarding claim 14, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the thickness of the +C plate is from 0.4 to 1.0 μm . Claim 14 is therefore unpatentable.

26. Regarding claim 15, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the optical retardation $d_a\Delta n_a$ of the +A plate is from 50 to 200 nm. Claim 15 is therefore unpatentable.

27. Regarding claim 16, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the optical retardation $d\Delta n$ of the +C plate is from 30 to 150 nm. Claim 16 is therefore unpatentable.

28. Regarding claim 17, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the optical retardation $d_a\Delta n_a$ of the +A plate is from 69 to 184 nm. Claim 17 is therefore unpatentable.

29. Regarding claim 18, Allen in view of Park discloses an LCD according to claim 1 (see Allen figures 4-5, for instance), wherein the optical retardation $d\Delta n$ of the +C plate is from 46 to 115 nm. Claim 18 is therefore unpatentable.

30. Regarding claims 19 and 20, Allen in view of Park discloses an LCD according to claim 7 (see Allen figures 4-5, for instance), wherein the positions of the individual components are selected from the following configuration:

P(90)	C	A(90)	LC(0)	P(0)
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31. Claims 19 and 20 are therefore unpatentable.

32. Regarding claim 24, Allen in view of Park discloses an LCD according to claim 4 (see Allen figures 4-5, for instance), wherein S in each case is independently a stretched plastic film selected from TAC, DAC, and PVA films. Claim 24 is therefore unpatentable.

33. Regarding claim 25, Park in view of Allen discloses an LCD according to claim 4 (see Allen figures 4-5, for instance), wherein the +A plate comprises polymerized liquid crystal material obtained from polymerizable LC material comprising: 5 - 70 % by weight of one or more direactive achiral mesogenic compounds, 30 - 95 % by weight of one or more monoreactive achiral mesogenic compounds, and 0 to 10 % by weight of one or more photoinitiators. Claim 25 is therefore unpatentable.

34. Regarding claim 26, Allen in view of Park discloses a liquid crystal display according to claim 4 (see Allen figures 4-5, for instance), wherein the +C plate comprises polymerized liquid crystal material obtained from polymerizable LC material comprising: 5 - 70 % by weight of one or more direactive achiral mesogenic

compounds, 30 - 95 % by weight of one or more monoreactive achiral mesogenic compounds, and 0 to 10 % by weight of one or more photoinitiators. Claim 26 is therefore unpatentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANAEL R. BRIGGS whose telephone number is (571)272-8992. The examiner can normally be reached on 9 AM - 5:30 PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Andrew Schechter/
Primary Examiner, Art Unit 2871